

Date: Fri, 25 Apr 1997 10:10:12 -0700 (PDT)  
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Subject: Science for Resotration--CALFED (fwd)  
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X-MIME-Autoconverted: from QUOTED-PRINTABLE to 8bit by goldeneye.water.ca.gov id KAA25268

Rick, FYI. I'm not sure you got this message. Chris

----- Forwarded message -----

~~Date: 21 Apr 97 13:08:00 +0000~~

~~From: Bob Spies <spies@amarine.com>~~

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Subject: Science for Resotration--CALFED

To: Distribution  
From: Bob Spies

The following is part of the continuing dialog on use of science in restoring the San Francisco Bay and Delta. It includes a comment by Leo Winternitz and a general reply from me. I believe that this exchange is healthy and will ultimately be productive. My original email seems to have triggered some sort of electronic glitch here or at UC Davis that multiplied as a series of replicated undelivered messages, so I am resending it with some additional editing. If you have already seen it, please have patience.

Leo,

Without a doubt great difficulties lie ahead for CALFED. Unfortunately, there are no

user manuals on how to restore aquatic ecosystems. Great volumes of data and information exist, but an overall understanding of how the system works and how it can be made whole is elusive. Yes, much data has been gathered in the last 15 years, and much has been learned. We are probably as close as one can hope to get to a consensus that water flows need to be restored to the system, although the evidence is still mixed and less than we would all hope. However, what do we say with any surety as to whether fish populations are impaired by contaminants? Millions of dollars are spent on toxics monitoring, but I know of only a few studies on a small number of fish species that really seriously address this question. This is not an impossible question to approach, but the fact is we do not have anything resembling an answer. In this respect I agree with Dr. G. Fred Lee that: 1 there is great potential for doing the wrong thing, 2. the laws and regulations on toxic materials cannot be assumed to provide guidelines to fixing problems with resources, and 3. there is a need for strong peer review in order to assure that ecotoxicological studies are as well focused and designed as well as we can make them.

Perhaps, as you and Pete Rhoads have suggested, given the need to show something concrete there needs to be direct action on some problems that are likely having some negative effects, but fixing a whole number of "problems" without any further knowledge is to embark on a ship without a rudder. I am also sure that the projects the PWT have identified make sense; I would not have gone to so many meetings in Sacramento and ultimately voted for the projects I did if I thought otherwise. However, these projects should fit into some context and be part of some process. I agree Leo that this does not mean that we should start from scratch; but someone needs to put the pieces together that are lying about us on the floor.

Also, if we cannot stand in front of the public and explain in simple language how what we are proposing makes sense, and what comes next, then we do not deserve to be supported on public funds. My argument is that we as scientists have an obligation and duty to press for a sensible course in an open public process. Grabbing the money and running only contributes to personal and public cynicism. Restoration can be process for not only making the ecosystem whole, but us as well.

Bob Spies

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Date: 4/18/97 1:20 PM

To: Bob Spies

From: Leo Winternitz

Chris and Contaminant Team Members --

G. Fred Lee's comments make much sense to me. For the most part, I have also agreed with comments of others. However, I have a serious concern with the general direction of thought I am picking up from many of the comments.

Most commentators (all)? stressed that we need to identify and understand the causes of water quality related impairments before a whole bunch of money is spent reducing contaminants of concern. Well thought out strategies were described for doing this. My question is, what have contaminant researchers in this estuary been doing the past 15 or so years? Granted, there has not